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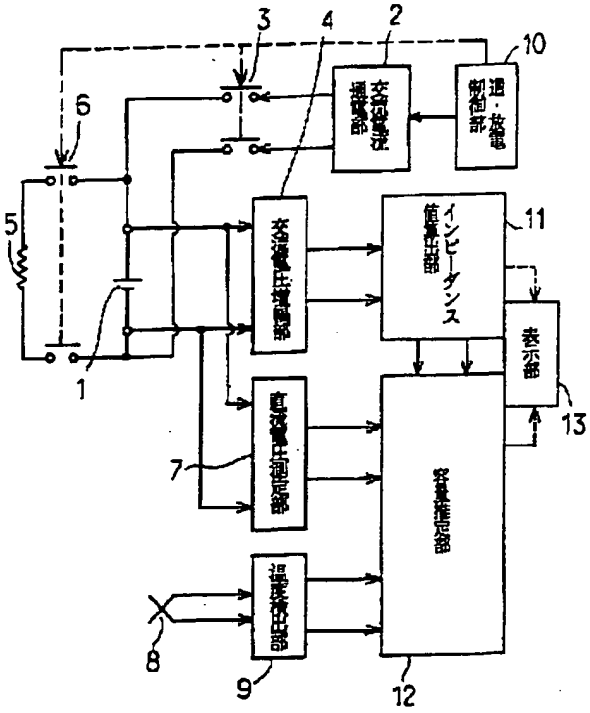
TITLE : APPARATUS FOR DETECTING LIFE OF SEALED LEAD STORAGE BATTERY



ABSTRACT : PROBLEM TO BE SOLVED: To exactly detect the life of a sealed lead storage battery by accurately estimating the discharge capacity of the battery without being influenced by a ripple voltage or temperatures.

SOLUTION: An A.C. of a constant frequency is supplied to a battery 1 to be measured from an A. C. feed part 2 for a predetermined time. Only an A.C. voltage component of the same frequency as that of the A.C. is detected from a terminal voltage of the battery 1 and amplified at an A.C. voltage amplification part 4. A voltage response waveform output from the amplification part 4 is Fourier-transformed at an impedance calculation part 11, thereby, an amplitude of the A.C. voltage component of the same frequency as that of the supplied current is detected. Impedance value of the battery is calculated from the amplitude. A D.C. voltage and a surrounding temperature of the battery 1 when the battery 1 is discharged through a discharge load resistor 5 for a predetermined time are measured. The discharge capacity is estimated by a capacity estimation part 12 on the basis of values obtained by correcting, with the surrounding temperature of the battery, the impedance value of the battery 1 and the voltage of the battery after discharged for the predetermined time to detect the life of the battery.